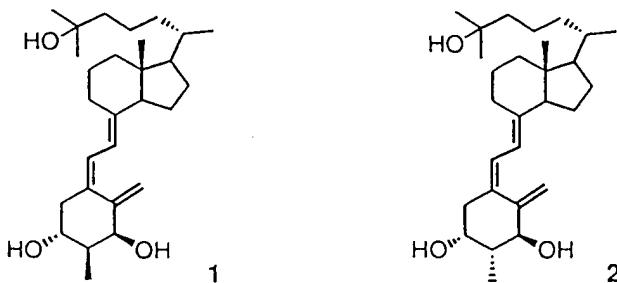


SYNTHESIS AND BIOLÓGICAL ACTIVITIES OF 2-METHYL-20-EPİ ANALOGUES OF $1\alpha,25$ -DIHYDROXYVITAMIN D₃. T. Fujishima, Z.-P. Liu, K. Konno and H. Takayama Faculty of Pharmaceutical Sciences, Teikyo University, Sagamiko, Kanagawa 199-01, JAPAN.

Active conformations of the A-ring of $1\alpha,25$ -dihydroxyvitamin D₃ is still unclear. In order to investigate the conformation-activity relationship of the A-ring portion, we have synthesized the 2-methyl analogues of $1\alpha,25$ -dihydroxyvitamin D₃, demonstrating that the introduction of the 2-methyl group elevates the affinity to the nuclear receptor (VDR) in some cases. In the present work, we designed and synthesized 2-methyl-20-epi analogues of $1\alpha,25$ -dihydroxyvitamin D₃. The binding affinities of the synthesized compounds were preliminarily tested using the bovine thymus vitamin D receptor. The 2α -methyl-20-epi analogue (1) exhibited about ten-fold higher potency than $1\alpha,25$ -dihydroxyvitamin D₃, whereas the 2β -methyl-20-epi analogue (2) had similar activity to $1\alpha,25$ -dihydroxyvitamin D₃.



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 (e) Gene regulation by vitamin D steroids
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 (p) Biological actions of vitamin D metabolites (other)
 (q) Development & vitamin D
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 (u) Vitamin D-binding protein (DBP)

(v) Assay methodology (vitamin D & metabolites)
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(x) $1,25(\text{OH})_2\text{D}_3$ Receptor (VDR) polymorphisms
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 (zb) Cancer
 (zc) Neonatology/Pregnancy/Development
 (zd) Aging
 (ze) Dermatology
 (zf) Nutritional aspects
 (zg) Other (clinical topics)

Type name and mailing address of submitting author:

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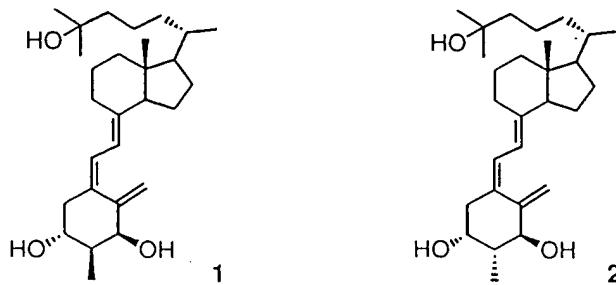
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